In the Claims:

1. (Previously Presented) A method for automatic discovery of network devices within a managed network comprising the steps of:

selecting a first network address from a first set comprising a plurality of network addresses;

sending a first message to said first network address requesting information about any device associated with said first network address;

awaiting a first appropriate response to said first message;

receiving a first appropriate response from a first device associated with said first network address;

determining if said first device provides routing capabilities;

if said first device provides routing capabilities, making said first device available for selection for management by a network management system;

selecting a second address from said first set of network addresses;

repeating said sending, and awaiting steps for said second network address.

2. (Original) The method of claim 1 further comprising the steps of:

failing to receive a second appropriate response to a second message sent to said second address within a response time period;

selecting a third network address from said first set of network addresses;

repeating said sending and awaiting steps for said third network address.

3. (Original) The method of claim 1 wherein said first set of network addresses comprises a range of network addresses.

4. (Original) The method of claim 1 wherein said first set of network addresses comprises a list of network addresses.

5. (Original) The method of claim 1 further comprising the steps of:

selecting a fourth network address from a second set comprising a plurality of network addresses;

sending a fourth message to said fourth network address requesting information about any device associated with said fourth network address;

awaiting an appropriate response to said fourth message;

6. (Original) The method of claim 1 wherein said step of sending said first message comprises sending said first message using a network management protocol.

7. (Original) The method of claim 6 wherein said network management protocol comprises a Simple Network Management Protocol (SNMP).

8. (Original) The method of claim 1 wherein said step of receiving said first appropriate response to said first message comprises receiving a message comprising information about a type of said first device.

9. (Original) The method of claim 8 wherein said step of receiving said first appropriate response to said first message comprises receiving a message identifying said type of said first device as a device having data forwarding capabilities.

10. (Original) The method of claim 2 wherein said step of failing to receive said second appropriate response to said second message comprises receiving a message comprising information about a type of a second device associated with said second network address.

11. (Original) The method of claim 10 wherein said step of failing to receive said second appropriate response to said second message comprises receiving a message identifying said type of said second device as a device other than a device having data forwarding capabilities.

12. (Original) The method of claim 1 further comprising the step of obtaining configuration information for said first message prior to sending said first message.

13. (Original) The method of claim 12 wherein said step of obtaining said configuration information for said first message comprises obtaining said configuration information from said first set.

14. (Original) The method of claim 12 wherein said step of obtaining said configuration information for said first message comprises obtaining a response time period.

15. (Original) The method of claim 12 wherein said step of obtaining said configuration information for said first message comprises obtaining security parameters.

16. (Original) The method of claim 1 wherein said step of making said first device available for selection for management by a network management system comprises adding said first device to a set of discovered devices.

17. (Original) The method of claim 16 wherein said step of adding said first device to a set of discovered devices comprises the step of deleting an existing device associated with said first network address from said set of discovered devices prior to adding said first device to said set of discovered devices.

18. (Previously Presented) The method of claim 16 further comprising the step of displaying said set of discovered devices on a display device.

19. (Original) The method of claim 1 further comprising the step of creating said first set of network addresses.

20. (Original) The method of claim 19 wherein said step of creating said first set of network addresses comprises receiving a beginning network address and an ending network address.

21. (Original) The method of claim 19 wherein said step of creating said first set of network addresses comprises receiving a data file containing a plurality of discrete network addresses.

22. (Original) The method of claim 1 further comprising the steps of:

receiving a fifth message from a fifth device associated with a fifth network address;

making said fifth device available for selection for management by a network management system.

23. (Original) The method of claim 22 wherein said step of receiving said fifth message from said fifth device comprises receiving a SNMP message.

24. (Original) The method of claim 22 wherein said step of making said fifth device available for selection for management by a network management system comprises adding said fifth device to a set of discovered devices.

25. (Previously Presented) A method of managing from a network management system (NMS), network devices added to a communication network, comprising:

discovering from the NMS a network device newly connected to said communication network;

determining if said network device has routing capabilities;

if said network device has routing capabilities, adding the network device to a list of detected devices and setting the status of said network device in said list set to uncommitted; and

removing said network device from said list upon receiving confirmation that said network device should be managed from said NMS.

26. (Previously Presented) The method of claim 28 wherein said step of sending comprises sending a SNMP request.

27. (Previously Presented) The method of claim 25 wherein said step of discovering comprises receiving at said NMS an SNMP notification from said network device upon connection to said communication network.

28. (Previously Presented) The method of claim 27 further comprising the steps of:

sending a request to network devices pertaining to a certain sub-network; and

receiving a response from said network device which identifies characteristics of said network device.

29. (Previously Presented) The method of claim 28 wherein said step of receiving said response comprises receiving a message comprising information about a type of said network device.

30. (Previously Presented) The method of claim 29 wherein said step of receiving said response comprises receiving a message identifying said type of said network device as a device having data forwarding capabilities.

31. (Previously Presented) An apparatus for automatic discovery of network devices within a managed network comprising:

a display device comprising a discovery range window for displaying a network address range for discovery of network devices and a discovered devices window for displaying identification information for devices discovered within said network address range, said devices providing routing capabilities.

32. (Original) The apparatus of claim 31 further comprising a user interface for accepting input from a user, said user interface comprising means for said user to specify said discovery range.

33. (Original) The apparatus of claim 32 wherein said user interface comprises means for said user to select one or more of said discovered devices displayed in said discovered devices window for management by a network management system.

34. (Original) The apparatus of claim 33 further comprising a network communications system for sending network communications to each network address in said discovery range and for receiving responses from any network address in said discovery range.

35. (Original) The apparatus of claim 32 wherein said range comprises a plurality of contiguous network addresses.

36. (Original) The apparatus of claim 32 wherein said range comprises a plurality of discreet, non-contiguous network addresses.

37. (Original) The apparatus of claim 34 comprising a message response analyzer for analyzing responses received from network addresses in said discovery range.

38. (Original) The apparatus of claim 37 wherein said message response analyzer comprises identification means for identifying a type of a device sending a response.

39. (Original) The apparatus of claim 34 wherein said network communications system comprises means for receiving messages originating from network devices.

40. (Original) The apparatus of claim 34 wherein said means for receiving messages originating from network devices comprises means for receiving SNMP messages.

41. (Original) The apparatus of claim 34 wherein said discovery range comprises IP addresses.

42. (Original) The apparatus of claim 31 wherein said discovered devices window comprises information identifying a discovered device's type.

43. (Previously Presented) The method of claim 28 wherein said step of sending the request to the network devices pertaining to a certain sub-network comprises sending the request to the network devices pertaining to a list of addresses.

44. (Previously Presented) The method of claim 28 wherein said step of adding is performed only if said network device has internet protocol (IP) forwarding capability.

45. (Previously Presented) The method of claim 28 wherein said step of adding is performed only if said network device has multiprotocol label switching (MPLS) capability.

46. (Previously Presented) The method of claim 28 wherein the step of receiving said response from said network device which identifies characteristics of said network device further comprises receiving the response from the network device which provides a description of the network device.

47. (Previously Presented) The method of claim 28 wherein the step of receiving said response from said network device which identifies characteristics of said network device further

comprises receiving the response from the network device which provides an identification of the network device.

48. (Previously Presented) The method of claim 28 wherein the step of receiving said response from said network device which identifies characteristics of said network device further comprises receiving the response from the network device which identifies services capabilities of the network device.